

CLAIMS

What is claimed is:

1 1. A method comprising:
2 receiving a code segment having a plurality of instructions, the code segment having an
3 outer scope and a number of inner scopes, wherein the plurality of instructions comprise a
4 number of pointers, wherein at least one of the number of pointers is restricted; and
5 determining, within one of the number of inner scopes, whether at least two pointers of
6 the number of pointers are aliases.

1 2. The method of claim 1, comprising determining a base pointer for each pointer of
2 the number of pointers.

1 3. The method of claim 2, wherein the determining a base pointer for each pointer of
2 the number of pointers comprises:
3 grouping pointers together upon determining that the pointers are copied to a
4 pointer that is not a restricted pointer.

1 4. The method of claim 3, wherein there is no grouping of pointers when the pointers
2 have distinct base pointers.

1 5. The method of claim 3, comprising for each instruction of the plurality of
2 instructions that accesses a pointer, determining which at least one restricted pointer is
3 within the scope of the pointer when the pointer is accessed.

1 6. The method of claim 4, wherein the determining, within one of the number of
2 inner scopes, whether at least two pointers of the number of pointers are aliases is based
3 on the base pointer for each of the number of pointers.

1 7. The method of claim 3, wherein the determining, within one of the number of
 2 inner scopes, whether at least two pointers of the number of pointers are aliases is based
 3 on, for each instruction of the plurality of instructions that accesses the pointer, which at
 4 least one restricted pointer is within the scope of the pointer, when the pointer is accessed.

1 8. A method comprising:
 2 receiving a code segment having a plurality of instructions, wherein the plurality
 3 of instructions comprise a number of pointers, wherein at least one of the number of
 4 pointers is restricted, and wherein the at least one restricted pointer is in-scope or out-of-
 5 scope; and
 6 determining whether at least two pointers of the number of pointers are aliases
 7 when each pointer of the at least two pointers is out-of-scope relative to the other pointers
 8 of the at least two pointers.

1 9. The method of claim 8 comprising determining a base pointer for each pointer of
 2 the number of pointers.

1 10. The method of claim 9, comprising determining, for each pointer of the number of
 2 pointers, whether each at least one restricted pointer is in-scope when the pointer of the
 3 number of pointers is accessed.

1 11. The method of claim 10 wherein the determining whether at least two pointers of
 2 the number of pointers are aliases is based on determining a base pointer for each pointer
 3 of the number of pointers.

